Analysis of candidemia epidemiological data and anti-fungigram by distinct methodologies in a large Brazilian teaching hospital

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Background: Candidemia results in substantial morbidity and mortality and species distribution and its susceptibility profile should be locally monitored. Antifungigram still a challenge but few laboratories have microdilution techniques in Latin America, in a routine basis, and other methodologies should be evaluated.

Methods: Epidemiological data from candidemia episodes were collected during 2006 in a large teaching hospital**.** Incidence was calculated by 1,000 admission and 1,000 patient days.

Minimal inhibitory concentrations (MIC) were determined using Sensititre Yeast-One Y8, and E-test. The following drugs were tested: amphotericin B (AMB); caspofungin (CAS); posaconazole (POS), fluconazole (FLU), Itraconazol (ITRA) and voriconazole (VOR). The disk diffusion method was also performed for FLU and VOR according to CLSI.

Results: One hundred and thirty-six cases of candidemia were identified and represented 3.5% of the overall positive blood cultures. Incidence was 1.87 cases per 1,000 admissions and 0.27 cases per 1,000 patient-days. 58.1% patients were male and the median age was 40 years old being cancer the most frequent associated underlying disease. *C. albicans* (52.2%), followed by *C. parapsilosis* (22.1%), *C. tropicalis* (14.8%) and *C. glabrata* (6.6%) were the more frequent species. Among 100 isolates viable for susceptibility tests 100% were susceptible to AMB (MIC 90 = 1.0 mg/L) and CAS (MIC 90 = 0.064 mg/L); 98% to VOR (MIC 90 = 0.008 mg/L); 91% to FLU (MIC90 = 0.5 mg/L); and 66% to ITRA (MIC 90 = 0.125 mg/L).

Posaconazole MIC90was 0.032 mg/mL. The percentage of essential agreement (EA) and categorical agreement (CA) between broth micro dilution and other methodologies were >93%, except for itraconazole (EA 80%, CA 70%). CA between Sensititre Yeast-One *versus* disk diffusion and E-test *versus* disk diffusion for FLU were respectively: (94%; 95%) and for VOR(96%,98%). Minor errors accounted for the majority of categorical errors.

Conclusion: Candidemia by *C. albicans* still the majority of episodes in our Hospital but non-*albicans C* species are a growing problem and its susceptibility should be closed monitored even though overall resistance still very low. Disk

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Prevalence of Cryptococcal meningitis among HIV seropositive patients in Georgia

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Background: Cryptococcal meningitis is a frequently observed opportunistic fungal infection in HIV seropositive patients in Georgia and an important cause of mortality among these patients. This study estimates the prevalence of cryptococcal disease in Georgia in 2003-2008 among human immunodeficiency virus (HIV)-infected patients who were at risk.

Methods: Numerator data were generated by surveying all HIV infected patients in Georgia during 2003- 2008 years. A routine serum cryptococcal antigen screening was performed on 920 HIV-positive/AIDS patients by ELISA (Premier Meridian, Italy) to improve the prognosis of cryptococcal meningitis in HIV-infected patients through earlier diagnosis. The cerebrospinal fluid (CSF) samples were processed for ELISA testing after preliminary microscopic examination, comprising wet mount, Indian ink.

Results: Cryptococcal antigen was detected in the sera of 103 (11.2%) of them. Cerebrospinal fluid was obtained from 98 of these 103 patients and the presence of Cryptococcus neoformans was demonstrated by direct microscopy in 64 (66%) of them. This represents 7% of the originally screened HIV seropositive group. The incidence of cryptococcal isolation was in the 30-45 age group and predominantly affected were male patients (59 from 64).

Conclusion: In Georgia prevalence of Cryptococcal meningitis among HIV seropositive patients is about 7%. We found some relationship between age, gender and prevalence of Cryptococcal meningitis among HIV infected patients. The routine mycological surveillance is required for HIV/AIDS patients to help in an early diagnosis and appropriate therapy.

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Clinical analysis of 92 patients with Fungaemia - data from national survey in Slovakia

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Background: A prospective national survey on fungaemia was done during 2005-2007 in Slovakia. The increasing incidence of fungaemia and candidaemia was documented (2.57 and 2.16/100.000/year, respectively) comparing previous